

panel along orthogonal X and Y directions to detect a pointing input and a pointing input position in the input operation area when the light beams are intercepted by the pointing input, a display area of the input operation area being visible through the transparent protective plate;

the pointing input device outputting pointing position data indicating the pointing input position, while the optical touch panel detects the pointing input,

the pointing input device outputting push detection data together with the pointing position data, when the electric signal is outputted from the piezoelectric substrate and the push against the transparent protective plate is judged while the optical touch panel is detecting the pointing input.

2. A pointing input device comprising:

a display panel for displaying any pointing input information on a display area thereof;

a transparent protective plate laminated on the display area of the display panel;

a piezoelectric substrate attached to the transparent protective plate, for converting deformation caused by a push against the transparent protective plate into an electric signal and outputting the electric signal; and

an optical touch panel disposed on the transparent protective plate, for emitting light beams for reticulately scanning an input operation area of the optical touch panel along orthogonal X and Y directions to detect a pointing input and a pointing input position in the input operation area when the light beams are intercepted by the pointing input, a display area of the input operation area being visible through the transparent protective plate,

the pointing input device outputting pointing position data detected by the optical touch panel when the electric signal is outputted from the piezoelectric substrate and the push against the transparent protective plate is judged while the optical touch panel is detecting the pointing input.

Kambara discloses an acoustic touch sensing device including an acoustic wave transducer for propagating a bulk acoustic wave through a substrate along an axis intersecting a surface of the substrate (see, e.g. FIG. 5 of Kambara). Gratings and reflecting arrays are employed on the surface of the substrate to generate directed surface waves from the bulk acoustic wave. Because the surface waves can be disturbed by touching a display area of the surface, a touching of the display area can be sensed.

The Examiner acknowledges that Kambara fails to disclose Applicants' claimed optical touch panel, but suggests that this feature is disclosed by Saijo. Saijo discloses an optical touch

To establish a prima facie case of obviousness, three basic criteria must be met. MPEP § 2143. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Applying the third requirement for making a prima facie case of obviousness, Applicants respectfully submit that insufficient motivation exists for combining the teachings of the Kambara and Saijo references for the purpose of suggesting Applicants' device as claimed in independent claims 1 and 2.

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

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Applicants respectfully submit that no such suggestion or motivation is provided by the two references applied in the present case.

Applicants' invention is directed to solve a problem associated with a conventional optical touch panel comprising paired photoreceptor devices arranged linearly arranged along X and Y directions around a perimeter of the panel (see, e.g., page 2, line 4 through page 4, line 10). Specifically, as the device can be activated by the momentary insertion and removal of a finger or pen within an interior area of the perimeter scanned by the photoreceptor devices, it becomes easy for the device to be unintentionally or accidentally activated. Applicants' invention overcomes this problem by coupling the photoreceptor-based device with a piezoelectric touch panel, and requiring each of these two components to indicate an activation before it is judged that the device has been activated.

Saijo is concerned with solving the problem of photoreceptor sensitivity to stray light sources in an optical touch panel, and teaches a method for addressing this problem by providing shielding members that cover the photoreceptors (see, e.g., abstract of Saijo). Saijo does not address or otherwise acknowledge the problem of accidental activation of the device resulting from momentary insertion of a pen or finger, which is the problem addressed by Applicants' claimed invention.


Kambara is concerned with the problem of configuring an acoustic touch sensor device to convert a bulk acoustic wave into surface waves of sufficient power to effectively signal touching at the surface of the device (see, e.g., column 6, lines 37 - 50 of Kamabara). Like Saijo, Kamabara does not address or otherwise acknowledge the problem addressed by Applicants' claimed invention.

As neither reference provides any motivation for combination with the other to solve the problem addressed by Applicants' claimed invention, Applicants respectfully submit that such motivation is suggested to one of ordinary skill in the art only in hindsight, using Applicants' claimed invention as a "roadmap." It is well established that the use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is impermissible (see, e.g., *W. L. Gore And Assocs. V. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312 - 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

CONCLUSION

If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Respectfully submitted,

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